

REMARKS

Reconsideration of this application is respectfully requested in view of the amendments and arguments presented herein. Claims 1-61 remain pending in the present application. Claims 1, 21, and 38 have been amended. No new matter has been added. Applicant understands new grounds of rejection have been presented.

35 U.S.C. Section 112 Rejections

The present Office Action rejects Claims 1-61 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicant has amended the specification and Claims 1, 21, and 38 herein. Dependent Claims overcome the rejections by virtue of their dependency. Accordingly, Applicant respectfully asserts that 35 U.S.C. 112, first paragraph, rejections are overcome.

The present Office Action rejects Claims 1-61 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The rejection states that Claim 1 recites, lines 2-4 “multicore processor comprising... processing elements” and “at least one which is a master processing unit” it is unclear if the master processing unit is a processor element. Applicant respectfully disagrees. Applicant respectfully asserts

that one of ordinary skill in the art would understand the Claim language of a plurality of interconnected processor elements, at least one of which is a master processing unit, as claimed.

The rejection further states that lines 11-13 recite “control logic.... separate from the master processing unit” it is unclear what constitutes control logic separate from the master processing unit. Applicant respectfully disagrees. Applicant respectfully asserts that one of ordinary skill in the art would understand the claim language of “a control logic separate from the master processing unit,” as claimed. Accordingly, Applicant respectfully asserts that 35 U.S.C. 112, first paragraph, rejections be withdrawn.

35 U.S.C. Section 103(a) Rejections

The present Office Action rejects Claims 1-5, 7-14, 18-19, 21-32, 38-41, 47-48, 50, 51, 53 and 56-59 as being unpatentable over US Patent No. 5,202,987 (hereinafter Bayer) in view of US Patent No. 5,504,670 (hereinafter Barth), and in view of US Patent No. 6,496,880 (hereinafter Ma). Applicant respectfully traverses.

Applicant directs the Examiner to Claim 21 which recites (emphasis added):

A multicore processor comprising:

a plurality of interconnected processor elements, at least one of which is a master processing unit, each element providing resources for processing executable transactions, and wherein said plurality of interconnected processor elements are integrated into a single integrated circuit die;

a resource management and task allocation controller, in communication with each of the processor elements but separate from the master processing unit, and comprising control logic for allocating executable transactions within the multicore processor to a one of the processor elements in accordance with one of a range of pre-defined allocation parameters; and

a plurality of controller clients, at least one of which is associated with a corresponding one of the plurality of interconnected processor elements, wherein each controller client is configured to control communications between its said associated processing element and the rest of the multicore processor, dependent upon control signals from the task allocation controller.

Claims 1 and 38 recite distinguishing limitations similar to those of Claim 1.

The rejection admits that Bayer does not specifically disclose a plurality of controller clients, at least one of which is associated with a corresponding one of the plurality of interconnected processor elements, wherein each controller client is configured to control communication between its said associated processing element and the rest of the multicore processor, dependent upon control signals from the task allocation controller. The rejection alleges that Barth teaches a plurality of controller clients, at least one of which is associated with a corresponding one of the plurality of interconnected processor elements, wherein each controller client is configured to control communications between its said associated processing

element and the rest of the multicore processor, dependent upon control signals from the task allocation controller. Applicant respectfully disagrees.

To the extent that Bayer may mention a device that uses N independent sub-controllers in conjunction with a switchable common bus to allocate the site resources (Col. 5, lines 5-7), Applicant respectfully asserts that Bayer does not teach or suggest a plurality of controller clients each configured to control communication between its said associated processing element and the rest of the multicore processor, as claimed. Applicant respectfully asserts that Bayer mentions sub-controllers that facilitate reallocation of resources (Col. 5, lines 3-5). Further, Applicant respectfully asserts that Bayer is silent as to a plurality of controller clients each configured to control communication between its said associated processing element and the rest of the multicore processor, as claimed. Applicant respectfully asserts that Ma does not remedy the shortcoming of Barth and Bayer. Applicant respectfully asserts Ma is silent as to a plurality of controller clients, as claimed. Therefore, Applicant respectfully asserts that embodiments as recited by Claim 21 are not rendered obvious by the cited references within the meaning of 35 U.S.C. 103(a).

Independent Claims 1 and 38 are patentable for similar reasons as recited above. Accordingly, Applicant respectfully asserts that dependent

Claims 2-5, 7-14, 18-19, 22-32, 39-41, 47-48, 50, 51, 53, and 56-59 are patentable by virtue of their dependency.

As per Claim 12, the rejection relies on Bayer teaching control logic comprising a time manager configured to provide timer function to an executable transaction manager. Applicant respectfully disagrees. Applicant respectfully asserts that Bayer is silent as to a time manager configured to provide timer functions, as claimed. Applicant respectfully asserts that the mere mention of minimal time needed for allocation tasks (Col. 9, lines 1-3) does not teach or suggest a time manager configured to provide a timer function to an executable transaction manager, as claimed. It appears that that the rejection is improperly attempting to rely on inherency. Applicant wishes to remind the Examiner that “[t]o establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)

“In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the

determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). Therefore, Applicant respectfully asserts that embodiments of the present invention as recited in Claim 12 are not rendered obvious within the meaning of the 35 U.S.C. 103(a).

As per Claim 47, the rejection alleges that Barth teaches creating, executing or deleting an executable transaction for a first management client, with a second transaction management client. Applicant respectfully disagrees. To the extent that Barth may mention that each sub-controller can control the resources on the lower level (Col 6, line 21), Applicant respectfully asserts that Barth does not teach or suggest creating, executing or deleting an executable transaction for a first transaction management client, with a second transaction management client, as claimed (emphasis added). Further, Applicant respectfully asserts that Barth is silent as to a first management client and a second management client, as claimed. Therefore, Applicant respectfully asserts that embodiments of the present invention as recited in Claim 47 are not rendered obvious within the meaning of the 35 U.S.C. 103(a).

The present Office Action rejects Claims 6, 20, 33-37, 45, and 46 as being unpatentable over Bayer in view of Barth, further in view of Ma, and

further yet in view of US Patent No. 6,314,501 (hereinafter Gulick).

Applicant respectfully traverses.

For the reasons stated above, Applicant respectfully submits that independent Claim 1, from which Claims 6 and 20 depend and independent Claim 21, from which Claims 33-37 depend, and independent Claim 38, from which Claims 45 and 46 depend are allowable over the combination of Bayer, Barth, and Ma. In addition, Applicant respectfully submits that Gulick does not remedy the shortcomings of the combination of Bayer, Barth, and Ma. Therefore, Applicant respectfully submits that Claims 6, 20, 33-37, 45, and 46 are also allowable over the combination of Bayer, Barth, Ma, and further yet in view of Gulick as being dependent on allowable base claims.

As per Claim 20, the rejection alleges that Gulick teaches that the control logic further comprises a system interrupt manager, for converting system interrupts in a first format employed within the multicore processor, into controller interrupts in a second, different format, which second format is understandable by the executable transaction manager. Applicant respectfully disagrees. To the extent that Gulick may mention that the receiving partition receives an inter-processor interrupt from a sending partition (Col. 44, lines 64-65), Applicant respectfully asserts that Gulick fails to teach or suggest control logic further comprising a system interrupt

manager, for converting system interrupts in a first format employed within the multicore processor, into controller interrupts in a second, different format, which second format is understandable by the executable transaction manager, as claimed. That is, Applicant respectfully asserts that Gulick merely mentions inter-processor interrupts between partitions (Col. 44, lines 64-65). Applicant respectfully asserts that Gulick is completely silent as to the conversion of interrupts between a first interrupt and a second interrupt format, as claimed. Therefore, Applicant respectfully asserts that embodiments as recited by Claim 20 are not rendered obvious by the cited references within the meaning of 35 U.S.C. 103(a).

The present Office Action rejects Claims 15-17, 42, 52, 55, and 60 as being unpatentable over Bayer in view of Barth, further in view of Ma, and further yet in view of US Patent 5,592,671 (hereinafter Hirayama). Applicant respectfully traverses.

For the reasons stated above, Applicant respectfully submits that independent Claim 1, from which Claims 15-17 depend, independent Claim 38 from which Claims 42, 52, 55, and 60 depend are allowable over the combination of Bayer, Barth, and Ma. In addition, Applicant respectfully submits that Hirayama does not remedy the shortcomings of the combination of Bayer, Barth, and Ma. Therefore, Applicant respectfully submits that

Claims 15-17, 42, 52, 55, and 60 are also allowable over the combination of Bayer, Barth, Ma, and Hirayama as being dependent on allowable base claims.

The present Office Action rejects Claims 43 and 44 as being unpatentable over Bayer, in view of Barth, further in view of Ma, and further yet in view of Hirayama, and further yet in view of Gulick. Applicant respectfully traverses.

For the reasons stated above, Applicant respectfully submits that independent Claim 38, from which Claims 43 and 44 depend are allowable over the combination of Bayer, Barth, Ma, and Gulick. In addition, Applicant respectfully submits that Hirayama does not remedy the shortcomings of the combination of Bayer, Barth, Ma, and Gulick. Therefore, Applicant respectfully submits that Claims 43 and 44 are also allowable over the combination of Bayer, Barth, Ma, Hirayama, and Gulick as being dependent on allowable base claims.

The present Office Action rejects Claim 49 as being unpatentable over Bayer, in view of Barth, in view of Ma, and further yet in view of US Patent No. 4,414,624 (hereinafter Summer). Applicant respectfully traverses.

For the reasons stated above, Applicant respectfully submits that independent Claim 38, from which Claim 49 depends are allowable over the combination of Bayer, Barth, and Ma. In addition, Applicant respectfully submits that Summer does not remedy the shortcomings of the combination of Bayer, Barth, and Ma. Therefore, Applicant respectfully submits that Claim 49 is also allowable over the combination of Bayer, Barth, Ma, and Summer as being dependent on allowable base claims.

The present Office Action rejects Claim 61 as being unpatentable over Bayer, in view of Barth, in view of Ma, and further in view of US Patent No. 4,001,783 (hereinafter Monahan). Applicant respectfully traverses.

For the reasons stated above, Applicant respectfully submits that independent Claim 21, from which Claim 61 depends is allowable over the combination of Bayer, Barth, and Ma. In addition, Applicant respectfully submits that Monahan does not remedy the shortcomings of the combination of Bayer, Barth, and Ma. Therefore, Applicant respectfully submits that Claim 61 is also allowable over the combination of Bayer, Barth, Ma, and Monahan as being dependent on allowable base claims.

CONCLUSION

Applicant respectfully asserts that all claims (Claims 1-61) are in condition for allowance and Applicant earnestly solicits such action from the Examiner. The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 50-4160.

Respectfully submitted,
MURABITO, HAO & BARNES

Dated: 1-26-2010

/Michael D. Sochor/
Michael D. Sochor
Registration No. 58,348

Two North Market Street
Third Floor
San Jose, CA 95113
(408) 938-9060